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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/725,706	11/29/2000	David Kalman Biegelsen	D/A0907 690-009693-US(PAR)	8832

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EXAMINER

ABRAMS, NEIL

ART UNIT

PAPER NUMBER

2839

DATE MAILED: 09/08/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/725706

Applicant(s)

Examiner

Group Art. Unit

2839

—The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

☒ Responsive to communication(s) filed on 7-28-03

☐ This action is FINAL.

☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

☒ Claim(s) 1-30 is/are pending in the application.

Of the above claim(s) 19-30 is/are withdrawn from consideration.

☐ Claim(s) is/are allowed.

☒ Claim(s) 1-4, 7-11, 14-18 is/are rejected.

☒ Claim(s) 5, 6, 12, 13 is/are objected to.

☐ Claim(s) are subject to restriction or election requirement

Application Papers

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119 (a)-(d).

☐ All ☐ Some* ☐ None of the:

☐ Certified copies of the priority documents have been received.

☐ Certified copies of the priority documents have been received in Application No. _____.

☐ Copies of the certified copies of the priority documents have been received

in this national stage application from the International Bureau (PCT Rule 17.2(a))

*Certified copies not received: _____

Attachment(s)

☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

☐ Interview Summary, PTO-413

☒ Notice of Reference(s) Cited, PTO-892

☐ Notice of Informal Patent Application, PTO-152

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Other _____

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Non-elected claims should be canceled in the response.

Claims 7, 14, intended meaning of "di-helic" should be discussed with reference to the
figs.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the
basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public
use or on sale in this country, more than one year prior to the date of application for patent in the United
States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all
obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth
in section 102 of this title, if the differences between the subject matter sought to be patented and the prior
art are such that the subject matter as a whole would have been obvious at the time the invention was made
to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be
negated by the manner in which the invention was made.

Non-elected claims 15-18 should be canceled in response.

Claims 1-4, 7, 8-11 and 14-18 are rejected under 35 U.S.C. 103(a) as being unpatentable
over Dahlgren in view of Luetzow and Japan 6-36620 and Moessinger.

Dahlgren discloses a system with a stretchable interconnect or cable 16 between relatively
movable devices 21, 22. Since only the interconnect is claimed, details of devices 22, 22 cannot
be relied upon to overcome the rejection. The Dahlgren cable is not disclosed as formed by
photolithography. This however is standard procedure as shown by Luetzow, col. 5, lines 20-28.
Obvious to so form Dahlgren cable for efficient manufacture. Claim 2, 7 also read on Dahlgren

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cable with memory feature. For claims 3, 4, V-shapes in a cable are not shown by Dahlgren but are taught by Japan and Moessinger, fig. 4. Obvious to use such shape in Dahlgren cable as these would occupy less space than do the coils.

Claims 8-11, 14-18 are included since the sensor array and robot limitations are not tied in with the "electronic devices" of claim 8. For example obvious the Dahlgren part 22 could include a sensor array and be part of a robot assembly. The intended inventive concept of claim 8 appears to involve use of a stretchable interconnect between sensor devices but this is not required by claim language. Change of claim 8 lines 1, 3 to all for "two electronic sensor devices" would overcome this rejection of claim 8. Claim 18, note use ^{of} plural cables in Dahlgren. Claims 10, 11, see claims 3, 4 discussion.

Claims 1-4, 7, 8-11 and 14-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moessinger in view of Luetzow, Dahlgren and Germany 4038394.

Moessinger shows a stretchable cable 6 used to join electronic devices. Typical to form such cable by photolithography (plating) as is standard and as also shown by Luetzow. While Moessinger assembly is adequate in this regard also obvious to use such cable in Germany fig. 3 system in place of cable 66 attached to moving object 37. Note the German patent is cited by Moessinger as showing intended usage. Claims 3, 4, 10 and 11, Moessinger cable is formed into V-shapes at 6. Claim 8, treated as discussed in rejection using Dahlgren. For claims 2, 7, 9, 18 in Moessinger applied together with Germany fig. 3, system, also obvious to use a coiled,

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memory cable in view of Dahlgren. This would remove the loose cable slack shown in Germany, fig. 3.

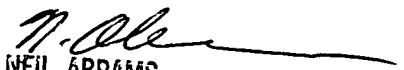
Claims 1, 3, 4, 8, 10, 11 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Fullen alone or taken in view of Luetzow.

Fullen (fig. 13) discloses a system with devices (sensors) 126, 128 joined by conductors 136 deposited on membranes 124, 134. The membranes being stretchable (col. 5, lines 27-32), the conductors 136 must also stretch. Claims 1, 8 terms photolithography does not define structurally over Fullen deposited traces.

Should above matters be at issue, also seem to be obvious (inherent) that fig. 13 thin layers with cutouts would be stretchable as would the trace conductors and also obvious to form traces by Luetzow electrodeposition (photolithography) step which is standard. Claims 3, 4, 10, 11 met by shapes of traces 136, 138 at 136. This would simplify manufacture of the circuitry. Claim 8, treated as discussed above. For claims 3, 4, 10, 11, Smela lacks V-shaped traces. Obvious to form 30 with cutouts, angled traces in view of Fullen, fig. 13 for greater elasticity. Fig. 11A also applied with lights 26 read as devices (sensors).

Claims 5, 6, 12 and 13 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication should be directed to N. Abrams at telephone number 308-1729.


NEIL ABRAMS
EXAMINER
ART UNIT 322